

UCLA CEE 141: Structural Steel Design

Fall 2018

Class Project Assignment



Westwood Blvd.

Los Angeles, CA 90024

MEMO

Date: October 15, 2018

To: CE 141 Student Engineering Firms

From: Susie Bruin, AIA, Principal Architect

Re: West Coast Office Headquarters for Yoogoo - Structural Design
Increment 1 Submittal Requirements

Please fulfill the following requirements for Increment 1 of the project, due Monday, October 22, 2018 at the beginning of class.

- Determine appropriate dead and live loads for each floor of the building based on ASCE 7-10 requirements and information provided in the "Project Overview" memo, dated October 15, 2018.
 - Level 1 is on grade, so you do not need to determine any loading for it.
 - Tabulate the dead load for each floor following the examples worked out in class and discussion.
- Determine the design dead and live loads for each column in the building.

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- Also consider the exterior wall dead loads given in the Project Overview memo.
 - Determine the column loads at each level of the building.
 - Use all live load reductions allowed by Code.
- Design a W-shape section for each column in the building.
 - Due to transport limitations, determine locations of column splices such that the maximum length of a column transported to the job is 35'-0". You can assume that each column splice costs \$1,000 to install.
 - To maximize rentable square footage, please ensure that columns be no larger than 16"x16" square in cross-section.
- Submit your calculations and a column schedule drawing for review.

Remember to keep the original copy of your work and hand in a photocopy for grading.